

APPENDIX 4

4 Project Specifications

The Project requirements are presented in the tables on the pages that follow. Tables have been provided to enable vendors to respond with minimal effort. However, where necessary please provide additional information in the Comments area. The columns provided are as follows:

The *ID* column has been provided for reference purposes to aid in quickly identifying a specific requirement in a particular section.

The *Priority* column contains an indication of the importance of the requirement:

- Mandatory – ePCR solution must offer this capability, minimum qualifications or acceptable level of response;
- High – these requirements are considered important for a successful implementation of an ePCR;
- Medium – an ePCR solution that offered this requirement would be preferred ; and
- Low – “Nice to Have”, future consideration or could survive without.

The *Requirement* column states the needs of the Sacramento Metropolitan Fire District’s EMS Division and it is expected that the vendor will respond to each requirement.

The *Response* column is included to enable us to assess the functionality of the proposed software and to determine how well it fits the Sacramento Metropolitan Fire District’s EMS Division requirements. Please indicate the function availability by entering one of the following on the appropriate line:

(F) Full	Full capability for this function is currently provided by your proposed solution
(P) Partial	Partial functionality is currently provided or functionality is not exactly as described or the system can be modified or enhanced relatively easily to comply. In Comments, functionality should be described or cross-referenced to a vendor section that provides additional information. If additional costs, cross reference to the cost table where cost detail is included.
(N) No	The proposed solution is unable to comply in any way. or The proposed solution is not compliant, however the system may be able to be modified or enhanced to comply; additional information is required to determine cost (indicate in Comments).

Please use the *Comments* column to identify or describe alternative features and to describe responses of partial functionality.

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ePCR Functional and Technical Requirements

Your responses to this section of the RFP will indicate how well the functionality of your system meets the requirements of Metro Fire EMS. Include demonstration media of the applications and screen examples showing the field data entry and server applications, if available, with your proposal. The system must be capable of handling the volume of data indicated in Sacramento Metropolitan Fire District EMS Statistics (refer to Reference A – Statistics).

4.1 Dispatch

The requirements in the Dispatch table that follows addresses the needs for interfacing dispatch systems with an ePCR.

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Portable devices receive event data directly from Sacramento Regional Fire/EMS Communication Center Computer Assisted Dispatch (CAD) via wired and wireless connection. ✓ Data transferred from the CAD(s) include: event times, date, address, destination, event type, call priority, agency, unit #, incident number. See Reference Material <u>D- CAD Interface Data Points</u> for specific data points of dispatch fields to be acquired through CAD		
2	Mand	Ability to interface with Intergraph PCR COBOL CAD system 3.1 (Now know as Northrop Grumman PSI). Please include up to three contact names and numbers of previous interfaces with PRC COBOL CAD.		
3	High	Ability for ePCR system to account for 100% of calls received from the CAD. Vendor will document solution.		
4	High	Ability to automatically synchronize field collection devices, including time sync, when connected to the ePCR server.		

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4.2 Assessment/Treatment

Requirements under Assessment/Treatment address the paramedics' needs while assessing and treating a patient at the point of care.

4.2.1 General

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The ability to initiate and begin recording patient information at any point and to any stage of completion.		
2	Mand	Patient care is paramount - any solution should enhance, not detract, from provision of care. ✓ Navigation of the application is simple and intuitive and is easier to use than a paper PCR ✓ Minimal time to process a PCR due to data entry time being equal to or shorter than using paper and as result "turn around" time will not be adversely affected – expectation for "turn around" time is 10 minutes for an average incident.		

4.2.2 Interfaces-Field Staff

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Graphical user interface allowing the medic to begin the documentation process anywhere on the PCR.		
2	Mand	Touch screen interface with buttons, etc. of sufficient size to be activated by a gloved finger rather than by a stylus, etc.		
3	Mand	Login information can be updated in the middle of a shift. (e.g. an existing crew member is replaced by a new crew member).		
4	Mand	Choice of inputting patient weights in either metric (gram, kilogram) or Imperial (ounces, pounds).		
5	Mand	It is mandatory that the person performing services be identified. The application may prompt for verification as to who performed these services or flag the associated field(s) with the attendant		

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ID	Priority	Requirement	Full, Partial, No	Comments
		identifier (i.e. initials, user ID).		
6	Mand	Ability for software to track additional EMS personnel performing treatments on a patient. Please specify the number of additional personnel that can be tracked to treatments.		
7	Mand	The ePCR software should have a screen button for quickly time stamping procedures (medications, IV, etc.) that are done. This tool would be used when ePCR application is used to record procedures in real time at the patient's side.		
8	Mand	Ability to access an incomplete PCR to continue data entry from another device.		
9	High	Unlimited vital signs sets capture.		
10	High	Unlimited number of procedure sets capture.		
11	High	Selection of procedures by name or code number. Logical grouping of procedures by type.		
12	High	Unlimited text entry in text fields.		
13	High	Ability to list and code primary, secondary and tertiary chief complaints		
14	High	Ability to calculate age when date of birth is entered.		
15	High	Age must be in appropriate units of time, e.g. for infants less than 30 days the units will be days, infants greater than 1 month but less than 1 year the units will be months.		
16	High	The application should have the ability to calculate the following based upon data entered: Glasgow Coma Score (GCS) APGAR Score Drip Rate Calculator Drug Dosage Calculator		
17	Mand	Ability to easily preview the ePCR before it is signed or finalized.		

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ID	Priority	Requirement	Full, Partial, No	Comments
18	High	A visual indication is used to identify mandatory fields on the user's interface.		
19	High	Ability to hyperlink from the list of incomplete mandatory fields to each incomplete field to data input screen.		
20	High	Ability to tab through all incomplete mandatory fields.		
21	High	Ability to choose a reason from a table, pick list or give original reason for leaving a mandatory field incomplete causing the field to be accepted as completed.		
22	High	The software may make other fields mandatory when the user overrides a mandatory field.		
23	High	Login procedure is expected to be done at the beginning of a shift. Information from the login process will be applied to all PCRs completed until system logout.		
24	Mand	Ability to use events timed stamped within the Zoll E series or LP-12 series monitor that would auto populate and this event into the procedure section of the ePCR system.		
25	High	The logon information of primary attendant may, by default, populate "who performed treatment" field for the entire PCR.		
26	High	Ability to document treatments performed and who performed treatments done prior to EMS arrival (e.g. by bystander, family, first-aider, firefighter).		
27	High	The user may be able to assign the performance of treatments to non-EMS persons such as firefighters, bystanders, first-aid providers, family, etc.		
28	High	Ability to add free text during assessment input with specific assessments. User is not required to wait until the end of the ePCR to put in free text.		
29	High	Without overriding the original information, provide the ability to document changes in primary and secondary assessments as a result of treatment or due to a change in a patient's condition without any treatment.		

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ID	Priority	Requirement	Full, Partial, No	Comments
30	Mand	Ability to easily document pertinent negatives of all assessment fields.		
31	High	Time stamps should initiate records in the treatment section of that procedure with a time that can be later edited and have additional information added to complete the documentation of that procedure.		
32	Med	Ability to have the Sacramento Metropolitan Fire District Infection Control Manual and Personal Protective Equipment recommendations accessed from within the software.		
33	High	The ePCR software should also have a section to create a report for unusual circumstances that do not fall under an available section of the PCR.		
34	High	Ability for the user to access a list of all incomplete mandatory fields at any time during the process of completing the ePCR.		
35	High	Ability to speed up the selection of an item from a menu by keying in the first few letters of the item. The application may display a shortened list of possible menu items as the keying proceeds. e.g. morphine, enter 'mo' and the list of drugs should be narrowed to those starting with 'mo'. Continuing to enter characters will further narrow the choice		
36	Med	Ability for the specific individual on the ambulance crew assigned to the PCR to electronically sign the completed PCR. (Completion of the PCR in the field will be assigned/ attributed to a specific individual on the ambulance crew. This name may be visible on the screen while the PCR is being completed. This individual is expected to review the PCR on completion and electronically sign it.)		
37	Mand	Ability to have fields change from optional to mandatory based on the chief complaint entered by user.		
38	Mand	Ability to dynamically adjust the list of all incomplete mandatory fields based on fields entered.		

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ID	Priority	Requirement	Full, Partial, No	Comments
39	High	Ability for the software to inform the user that the treatment and procedures can only be done by an individual with a certain classification (e.g. paramedic only allowed to intubate).		

4.2.3 Interfaces- Monitor Defibrillator

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	All LifePak 12 or Zoll M or E series monitor/defibrillator data attaches to the PCR, e.g. events, 12 lead ECG strips, vital signs from attached monitors auto-populates the Vital Signs area of the PCR. This will be accomplished with both wireless and non-wireless connection (at least non-wireless) between monitor/defibrillator and portable device and non portable devices that use the ePCR software.		
2	Mand	The 1mm by 1mm grid behind the wave form should be included and readable on the printed report. The wave form should appear on the final printed report.		
3	High	The ability to playback monitor/defibrillator data and review entire call/code summary from the same device as the data was entered. Have the ability to select specific segments or events from the call to view and print with a completed PCR.		

4.2.4 Interfaces- Health Care Facilities

There are 4 Hospital Systems that the Sacramento Metropolitan Fire District delivers patients to on a regular basis: Kaiser Permanente(Kaiser), Mercy Health Care(Mercy), Sutter Health Care(Sutter), and the University California Davis Medical Center(UCD). The Sacramento Metropolitan Fire District would like an ePCR system to interface with the hospital RMS systems.

ID	Priority	Requirement	Full, Partial, No	Comments
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ID	Priority	Requirement	Full, Partial, No	Comments
1	High	Be able to create a data transfer interface from the ePCR to Hospital and Hospital to ePCR system to share specific data fields of patient records between the one system within one year of request. Proposer shall provide past history that demonstrates the capability to complete this requirement. See #6 below for minimum data set.		
2	Mand	The system will be able to provide a printed patient record within any Sacramento Area hospital via hospital fax.		
3	Mand	Ability for a PCR to be printed remotely within the district that is easy to review patient care in a retrospective manner.		
4	Mand	Completed PCRs should be exportable in Health Language 7 (HL7) format.		
5	Mand	The Solution will have the ability to export complete PCRs on demand, for select external clients, using fully secure remote access. Reports to authorized individuals at hospitals, Sacramento Emergency Medical Services Agency, Public Health Officers, and/or the Medical Examiner's office. Proponents should include specific details addressing how this requirement could be met.		
6	High	<p>Minimum fields required for downloading from Hospital System to Proposer System are as follows:</p> <ul style="list-style-type: none"> ✓ Patient Name ✓ Date of Birth ✓ Age ✓ Address ✓ Phone Number ✓ Social Security Number ✓ Name of Primary Payor or Insurance Company ✓ ID number of the Primary Payor or Insurance Company ✓ Name of Secondary Payor or Insurance Company ✓ ID number of the Secondary Payor or Insurance Company 		

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4.2.5 Other

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The product must currently interface with Sanitas Billing software to allow user agency or a third party vendor to bill for services rendered by the Sacramento Metropolitan Fire District. The data collected by this system is able to used internally by the Sacramento Metropolitan Fire District with Sanitas Billing software and be exported automatically to a third party vendor using Sanitas Billing software.		
2	High	<p>Contains a prescription drug database. Paramedics should be able to identify drugs by name and be provided with information detailing drug particulars. The database should be accessible from within the PC.</p> <ul style="list-style-type: none"> ✓ Ability to search for drug by generic and trade name ✓ Drug database should include: <ul style="list-style-type: none"> • Category or classification of drug • Indications for medications • Side effects • Method the drug is supplied 		
3	High	<p>Ability to view Sacramento County Emergency Medical Services Agency Policies and Procedures and Sacramento Metropolitan Fire District EMS Policies as a reference tool.</p> <ul style="list-style-type: none"> ✓ Available to review enroute/during/following event ✓ Quickly accessible and searchable 		
4	High	<p>Previous patient medical history is available.</p> <ul style="list-style-type: none"> ✓ Ability to maintain frequent patient lists downloaded to each portable device - containing basic information, e.g. DNR orders, allergy information ✓ The number of calls should define a frequent patient within a predefined period, e.g. week 		

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ID	Priority	Requirement	Full, Partial, No	Comments
5	High	Create an interface with Firehouse Software version 6.4.6 that will be able to upload patient care information from the ePCR system into the EMS section of Firehouse software to avoid duplication of patient care reporting. Please list all fields your proposed interface would transfer into the Firehouse software and include (if possible) the contact information of any previous clients who received such an interface.		

4.3 Documentation

Requirements under Documentation address the paramedic's needs documenting patient care. Ideally the solution should permit the paramedic to initiate their documentation at the "point of care".

4.3.1 General

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The ePCR system must incorporate the NHTSA Uniform PreHospital Dataset (NEMSIS). This requirement will be satisfied if the Proposer System is NEMSIS "Silver Level" compliant.		
2	High	Time sources synchronized from universal time source.		
3	High	Ability for a medic to handle and document multiple active PCRs at any given time. ✓ <u>Application can handle concurrent PCRs at different stages of completion from one or more devices</u>		
4	High	Saving of information is automated. ✓ Not dependent on closing a form or final "save action" ✓ Saving of information should not detract from patient care reporting		

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ID	Priority	Requirement	Full, Partial, No	Comments
5	High	<p>Ability to accept signatures where currently needed.</p> <ul style="list-style-type: none"> ✓ Attending paramedic, Driver paramedic, Physician's Authorization, Patient Refusal, Authorizing Official, Acceptance of care. ✓ Proposer will document all possible areas of the ePCR system that will accept signatures. 		
6	High	Input fields are a combination of mandatory fields, pick lists and narrative text, e.g. signatures – mandatory, receiving facility – pick list.		
7	Mand	It is easy to review procedures performed as well as the entire PCR prior to report finalization.		
8	Mand	<p>Meet or exceed needs for 'gold standards' for patient care records.</p> <ul style="list-style-type: none"> ✓ Medical records shall be kept on all patients contacted ✓ Records shall contain: incident location and location type, date and call times, patient name, gender and date of birth, vehicle number, and crew identification ✓ Records shall include: assessment of patient including vital signs, impression of patient condition, treatment and response to treatment, disposition of patient 		
9	Mand	<p>System allows for amending records on portable device.</p> <ul style="list-style-type: none"> ✓ System enables PCRs to be sent back to the medic for correction ✓ Original PCR and audit log can be generated for every case ✓ System displays the most recent version of a PCR on the mobile computer 		

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ID	Priority	Requirement	Full, Partial, No	Comments
10	High	<p>Resulting PCR (content and form) is a professional medical/legal document that can be printed for hard copy.</p> <ul style="list-style-type: none"> ✓ PCRs are legible, accurate, clean and tidy in appearance ✓ Ability to create multiple report templates that are group based, e.g. Consummes Services District Fire Department, Folsom Fire, Galt Fire, Sacramento City Fire, Sacramento Metropolitan Fire District. ✓ End user will have the ability to modify this report included with the software bid. 		
11	High	The ability to turn on or off a system-generated narrative included with the software bid.		
12	Mand	<p>Data set should allow for customization in the following respects:</p> <ul style="list-style-type: none"> ✓ Field labels are customizable – List those that are not. ✓ Application Administrator has ability to customize buttons to suit site-specific requirements. ✓ Fields in the application can be enabled/disabled/made mandatory at the discretion of the Application Administrator. ✓ Fields in the application can be made to disappear if not used. List those that do not have this capability. ✓ Preference/lookup tables can be updated to devices and remote PCs automatically. Such tables should include, but not limited to: <ul style="list-style-type: none"> ○ Employees, e.g. name, scope of practice, employee number, ○ Medications ○ Ambulance ○ Procedures ○ Exams ○ Facilities (hospitals) 		

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ID	Priority	Requirement	Full, Partial, No	Comments
13	Mand	The ePCR system will incorporate leading international data set standards including, but not limited to CEMIS and NEMIS and be able to export this information to a Local Emergency Medical Services Agency.		
14	High	When a crew logs off at the end of a shift and synchronizes their device to the server, all incomplete PCRs (not closed) will appear on the next device they log into. Any PCRs not completed by end of shift will be flagged for administrative review.		
15	Mand	Spelling assistance where applicable <ul style="list-style-type: none"> ✓ Highlights misspelled words ✓ User invokes spellchecker ✓ Medical dictionary to be included – Please indicate number of total words in dictionary ✓ Ability for application administrator to maintain a common system dictionary 		
16	Mand	The ability to clear a PCR that has not been closed or synchronized in case a PCR has been started by accident. Please explain this process.		
17	Mand	The application has 'quick copy' functionality. Crew can copy any fields customized by the Application Administrator then change required field(s), e.g. families (similar demographics), multiple patients with similar injuries.		
18	Mand	The ability to document any valuables or personal items taken to and left at the hospital.		

4.3.2 Scenarios

Please review each scenario and indicate if your solution is capable of capturing and reporting the required information based on the scenario. Some scenarios request a solution based on your experience.

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ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The ability to view a PCR where multiple care providers and/or units provided treatment and/or transport to a single patient during a single incident as one contiguous record. The vendor will describe their solution to this scenario.		
2	Mand	<p>Ability to capture event, patient and assessment, narrative (patient and scene), treatment, non-transport and refusal related to a call, e.g.</p> <ul style="list-style-type: none"> ✓ Patient Refused – An ambulance has arrived at the scene and the individual refuses treatment. ✓ Treated on Scene/Released - An ambulance has arrived on scene and the patient is assessed, treated on scene and released. ✓ Police will Transport - An ambulance has arrived on scene, the patient is assessed, treated, and the police will transport. 		
3	Mand	<p>Ability to capture all pertinent fields on PCR related to a call, e.g.</p> <ul style="list-style-type: none"> ✓ Single Ambulance, Single Patient - An ambulance has arrived on scene, assessed, provided initial treatment and transporting the patient to a treatment facility. 		
4	Mand	<p>Ability to capture all pertinent fields on concurrent PCR(s) related to a call, e.g.</p> <ul style="list-style-type: none"> ✓ Single Ambulance, Multiple Patients - An ambulance has arrived on scene, assessed, provided initial treatment to multiple patients and transporting one (1) or more patients to a treatment facility. ✓ Multiple Ambulances On Scene - Multiple ambulances are assigned to a request, arrive on scene, assess, provide treatment to one (1) or more patient(s) and transport one (1) or more patients to a treatment facility. The initial ambulance to arrive on scene conducts a survey of the number and severity of injuries, focusing treatment on the most critical. Subsequent ambulances may be cancelled or treat patients on 		

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ID	Priority	Requirement	Full, Partial, No	Comments
		scene however not transport, or treat patients and transport.		
5	Mand	<p>Ability to capture all pertinent fields on PCR, and ability to transfer PCR data to another unit - Note: Wireless technology may not be available in all areas.</p> <ul style="list-style-type: none"> ✓ Transfer of Care – A paramedic engine response unit arrives at a scene, begins assessment and treatment, transfers care and responsibility to in an incoming transport ambulance. 		
6	Mand	<p>Ability to capture scene narrative and event ID, e.g.</p> <ul style="list-style-type: none"> ✓ Cancelled Prior to Arrival then dispatched to second call and cancelled. ✓ No Patient Found - An ambulance has arrived on scene and no individual(s) requiring pre-hospital emergency medical treatment can be located. ✓ Cancelled after Arrival - An ambulance has reported that they have arrived on scene and are informed simultaneously or shortly thereafter that the call has been cancelled. ✓ Other Ambulance Managed Scene/Patients - An ambulance has arrived on scene and another ambulance has managed the scene/patients. ✓ Individual(s) not Assessed for Treatment - An ambulance has arrived on scene and the individual(s) refuses care and is (are) not assessed for treatment. ✓ DOA - An ambulance has arrived on scene and the patient has expired. 		
7	High	<p>Ability to capture all pertinent fields on PCR, and ability to transfer PCR data to another unit. Explain how your solution would work?</p> <ul style="list-style-type: none"> ✓ First Responder to Transporting Ambulance- A fire engine has arrived to start initial care of patient. Patient care is transferred to transporting ambulance. 		

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ID	Priority	Requirement	Full, Partial, No	Comments
8	Mand	Refusal of Care form is available in multiple languages selectable from a pick list or facsimile to include at the following: English Spanish Vietnamese Russian (Eastern European) Chinese Tagalog (Filipino) Pharsi East Indian German French Italian		
9	High	Describe the ability to link via common ePCR fields to additional forms that possibly relate to other aspects of our business such as Adult and Child Protective Services forms used in Sacramento County.		
10	High	Depending upon the patient's primary and secondary complaints, the number of ePCR fields to be completed will increase or decrease.		

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4.3.3 Security

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Access to data entry application on portable devices is protected with password		
2	Mand	Users are allowed access to only patient records based on their (user's) roles, responsibilities or functions. Levels of security for this feature must be explained in detail in your bid.		
3	Mand	Application Security is provided through a username/password or biometric login process.		
4	Mand	Usernames and passwords are synchronized automatically with the data on the server.		
5	Mand	Data stored on the portable device should be fully encrypted to minimum 128-bit standard.		
6	Mand	Data in transit between portable devices and the servers must be encrypted with minimum 128-bit encryption standard.		
7	Mand	Application must provide adequate and configurable user access and process logs to facilitate effective auditing.		
8	High	Ability to 'quick lock' the application on demand and during inactivity. A button or menu-item in the application that would effectively 'lock' the application, similar to “ctrl-alt-delete” and the ability to lock the workstation.		
9	Med	The authorized user/crew member is consistently displayed on the screen. The name that is displayed while a PCR is completed will be the individual that has primary (attending) responsible for the PCR and will be signing for it.		
10	High	The ePCR software has a process to purge data from the client hardware, after it is successfully stored on the e-PCR server.		

4.3.4 Portable Device

List the preferred and/or supported hardware for your solution. Include manufacturer, model and any operating system specifications.

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ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	<p>Ability to create a PCR any time, anywhere (scene, ground, station). Devices are capable of withstanding extreme environmental conditions and exposure consistent with day-to-day high performance emergency health operations in Sacramento, California</p> <p>Heat and Cold.</p> <ul style="list-style-type: none"> ✓ Humidity ✓ Temperature ✓ Vibration (shock absorption) ✓ Submersible or waterproof/resistant – indicate submersion time ✓ Ability to view and read information easily on screen in varying light conditions, e.g. especially in direct sunlight ✓ Screen should not fail or deteriorate when exposed to different environments, e.g. if the device was not being used on a cold day and then was started, the screen should still perform properly 		
2	Mand	The hardware model selected and delivered will be early in its life cycle.		
3	Mand	<p>Portable devices are resistant to biomedical hazards typically exposed to during field operations.</p> <ul style="list-style-type: none"> ✓ Portable devices can be cleaned/disinfected with a variety of products typically used ✓ Please provide a list of 'tested' & proven cleaning agents ✓ Removable casing, if included, must also be washable 		
4	Mand	The portable device must be lightweight and compact.		
5	Mand	<p>Ability to print records at facilities. All printable documents should be 8¹/₂" x 11".</p> <p>Please indicate how records can be printed at receiving facilities (hospitals) via which of the follow or more methods:</p>		

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ID	Priority	Requirement	Full, Partial, No	Comments
		<ul style="list-style-type: none"> ✓ Parallel via desk docking station ✓ Infrared (IR) printing ✓ Universal Serial Bus (USB) via desk docking station ✓ Fax Back Capability - ability to enter destination info into PCR when loaded on central server, and application detects and initiates fax. ✓ Bluetooth connectivity ✓ Web based printing 		
6	High	Equipment carried in the ambulance must be secured to prevent injuries to staff/patients and/or accidental damage to the equipment. Please describe how you would propose to secure the tablet. Mounting brackets or similar devices that will be affixed to the vehicle need to be defined, including description, size Height x Weight x Depth, weight, and mounting method, e.g. screws/bolts.		
7	High	Identify any power requirements for the units while mounted in the vehicle including voltage, amperage, and amount of heat generated.		
8	High	Ability to ensure no data loss due to power loss on field collection device.		
9	High	Battery and power requirements: <ul style="list-style-type: none"> ✓ There should be a battery level alert that either beeps or provides a pop-up message stating how much battery life is left and that the user has “x” minutes to save before shutdown ✓ A battery level should always be visible to the user ✓ There should be two batteries for the device so that the removal of one battery will not leave the device without power (hot-swappable) 		

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ID	Priority	Requirement	Full, Partial, No	Comments
10	High	<ul style="list-style-type: none"> ✓ Batteries should be secure in the device, but should not require additional tools to remove ✓ Battery does not develop 'memory', frequent charging should not cause the battery to fail sooner ✓ Please provide the expected battery life for a battery that is being a) used and b) unused (standby) 		
11	High	<p>Please describe how the system provides sufficient devices to support redundancy at the field level, ensuring 100% availability for crews:</p> <ul style="list-style-type: none"> ✓ Please indicate what percentage of spare units should be available thereby ensuring redundancy at the field level, e.g. 5% to 10% ✓ Please indicate the turnaround time for a device that needs servicing ✓ Define expectation for whether or not software licensing is required for redundant devices 		
12	High	Portable device hardware should be proven and adhere to industry standards, e.g. standard ports (USB, serial) that are non-proprietary or specific to a vendor.		
13	High	Portable devices are non-proprietary, ability to support other applications - open architecture, open standards.		
14	High	Operating system upgrades on portable devices can be performed.		
15	High	Portable devices are capable of functioning as standalone devices, storing records to be forwarded at a later time. Disclose the number of PCRs that can be stored on device (minimum 50).		
16	Med	Portable devices are tamper proof, not allowing for installation of unapproved software or deletion or modification of any software.		

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ID	Priority	Requirement	Full, Partial, No	Comments
17	Med High Med Low	Ability to accept a variety of data inputs: <ul style="list-style-type: none"> ✓ Digital camera ✓ Freehand notes/sketches (utilize some form of sketch editor) ✓ Graffiti/stylus writing and have it transcribed into text ✓ Voice notes, e.g. wav, mp3 files 		
18	Med	Provide guidance based upon past deployments for annualized failure rate/replacement cost ratio for: <ul style="list-style-type: none"> ✓ portable devices ✓ battery (i.e. life expectancy) ✓ screen 		
19	Med	Store and forward capability is available. <ul style="list-style-type: none"> ✓ Store and forward is intrinsic in the communication system ✓ Under normal operating situations the storage period should be very short Portable devices will attempt to forward data when connected into a communication network		
20	Med	To prevent theft and to provide safety while in the ambulance, a release mechanism/unlocking clip should exist on the mounting system, e.g. to take the device off of the cradle/docking station the user would need to depress a button that releases the device.		
21	Med	Front-end data capture components, including device and software should have a minimum amount of downtime. <ul style="list-style-type: none"> ✓ Please provide a schedule for maintenance needed for the devices ✓ Please provide a 'life expectancy' figure associated with a device or Mean Time Between Failure (MTBF), e.g. 10,000 operating hours 		
22	High	All software updates to portable devices as well as any remote PCs, including preference and/or lookup tables, can be automated via network connection.		
23	Med	The ability to upgrade RAM and the hard drive on portable		

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ID	Priority	Requirement	Full, Partial, No	Comments
		devices.		
24	Med	Disclose minimum bandwidth required to transmit data and the average size of a PCR, e.g. at 56kb/s an average PCR will require “x” time to transmit to the server.		

4.4 Electronic Document Management

Requirements under Electronic Document Management address the organizational needs to store and manage patient care documentation.

4.4.1 General

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	All patient care data will be stored on a central server. If the central server is not located within the District, then all data will also be stored at a second site within the District that can be accessed by District employees through purchased ePCR software.		
2	Mand	100% data available on 100% of the calls where a PCR is required.		
3	Mand	Integrity of original, legally closed medical record is maintained. ✓ PCR can be made read-only after PCR closure rules have been satisfied, if desired ✓ Information can be amended via a server application by authorized users, e.g. demographics, insurance details – Log of any changes after PCR is closed will be made.		
4	Mand	Ability to search and retrieve a PCR using a variety of search parameters. Proposer will list the possible ways to search and retrieve a PCR.		

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ID	Priority	Requirement	Full, Partial, No	Comments
5	Mand	Data is available real/near real time to various stakeholders, e.g. destination (hospital), quality assurance, billing, and research processes. Please explain how this will occur. ✓ Paper ✓ Electronically		
6	High	All interfaces and communications between portable devices and other internal and external sources are available 7 days a week, 24 hours a day.		
7	Mand	Storage of PCR data: ✓ All records will be archived a minimum of 12 years ✓ Ability to archive selected records for extended periods ie pending legal action ✓ Ability to easily access archived information. Please explain procedure for accessing archived information.		
8	High	Ability to export a report to multiple formats including but not limited to: Health Level 7 (HL7), Microsoft Word, Adobe Acrobat, and Microsoft Excel..		
9	High	Integration with standard Windows applications, e.g. Microsoft Office.		
10	Mand	List all operating Platforms (Windows XP, Windows NT, ect) that Proposer Solution has successfully been implemented.		
11	High	Describe how your system deals with system times, and how it resolves potential conflicts (CAD times vs. device times). ✓ Times provided by CAD, upon synchronizing the device or by manual input into device ✓ Procedure times entered by paramedic ✓ Times obtained from Medtronic LP-12 or Zoll E series. Validation performed if procedure times not aligned with CAD times, e.g. procedure time occurs before arrival time		
12	Med	Once a PCR has been synchronized to the back end, the PCR should be available to the medic from any device running the		

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ID	Priority	Requirement	Full, Partial, No	Comments
		application, e.g. platform independent.		
13	Med	Ability for application administrator to check the status of devices in circulation, e.g. the administrator may want to find out how many devices are currently being serviced.		
14	Med	Administrator has the ability to easily modify any ePCR forms adding information, changing flow.		
15	High	Ability to attach supporting files to a PCR, e.g. an image from the incident, lawyer's notes, Do Not Resuscitate (DNR) orders, advanced directives.		
16	High	Users can add attachments or addendums but should not be able to edit the clinical portion of a PCR once it has been closed.		
17	Med	Ability to produce a list of supplies used on a call/shift generated through procedures performed. This information should be derived as a by-product of procedures performed, e.g. drug administered therefore a syringe and drug used.		

4.4.2 Administrator Tools

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The tables must be configurable by the customer. The Proposer must provide a detailed description of the types of administration, operations and ongoing support that will be required for the proposed software solution.		
2	Mand	The administrator should be able to manage the timing and content of an update targeting the mobile workstations. Software on mobile workstations should automatically receive software updates or table changes from server whenever a connection is present between mobile workstation and server.		

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ID	Priority	Requirement	Full, Partial, No	Comments
3	High	There should be the ability to easily input new/updated reference documents and configure the ePCR system to present these standards when required.		
4	High	Complex changes in standard practices should be tested and carefully implemented. The application administrator should have robust mechanism for creating, testing and implementing these changes within the ePCR system without impacting mobile service delivery.		
5	High	The application administrator should be able to implement new screens, processes tools and converters (e.g. Units of measure conversion, drug dose calculator) into the ePCR system as they become available.		
6	Mand	Ability to add and delete fields that will appear on the user interface.		
7	Mand	Ability to change the name displayed for any field.		
8	Mand	Modify values contained in parameter ranges, lists and tables.		
9	High	Make any field as a mandatory, conditional mandatory or optional.		
10	High	Ability to change the status of a mandatory field based on data input or button pushed.		
11	Mand	Determine which fields are shown to the user based on the value of another field (e.g. chief complaint is birth and apgar score appears).		
12	High	Ability to determine through process logic what fields are visible on a particular form or part of a form.		
13	High	Ability to force the use of ranges, lists or tables of parameters.		

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ID	Priority	Requirement	Full, Partial, No	Comments
14	High	Ability to customize the order in which the software tabs through the input fields.		
15	High	Ability to define field type (date, postal codes, integers, text, etc).		
16	High	Ability to define and place radio buttons, checkboxes and menu items which can initiate processes.		
17	Med	Ability for application administrator to check the status of devices in circulation, e.g. the administrator may want to find out how many devices are currently being serviced and last time device was synchronized with server.		
18	High	Any field can have a common default.		
19	High	Ability to provide a numeric range to control data input into a field.		
20	High	Ability to provide a text or numeric menus to control data input into a field.		
21	High	Administrator has the ability to easily add or modify supplementary forms, adding information, changing flow.		
22	High	The administrator should have the ability to change or add new patient information forms at any time.		
23	Mand	Ability to add/delete/edit user accounts/user info/passwords/levels of access in the system (server and device).		
24	Mand	Should be able to (add/delete/edit code tables) Procedure Codes.		
25	Mand	Should be able to (update/delete/edit) Protocol Content.		
26	Mand	Should be able to (update/delete/edit) Destinations Data.		
27	High	Should be able to Modify Field/Forms design.		
28	Mand	Should be able to create security controls for accounts and roles. Please explain.		

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ID	Priority	Requirement	Full, Partial, No	Comments
29	High	Should be able to create/modify rules for mandatory field entry.		
30	Mand	Should be capable of exception reporting on data verification.		
31	High	Application administrator has the ability to add signature fields.		
32	Mand	Should be capable of automatic notification of verification/data failure to supervisor immediately upon closure of the PCR.		
33	Mand	Should be able to define data to be updated to the mobile units during data transfer process.		
34	Mand	Should be able to capture multiple patients to same Event number.		
35	Mand	Should be capable of template control for automated narrative.		
36	Mand	Should be able to create/modify rules for data validation.		
37	Mand	Ability to monitor server from remote locations.		

4.4.3 Server Security

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Ability to limit/restrict access to those who require it, and further limit to that information needed for specific purposes, e.g. on a “need to know” basis.		
2	Mand	Processes and systems must be designed to ensure the security and integrity of patient information.		
3	Mand	Able to track all times, dates, and identities when a PCR was accessed.		
4	Mand	PCR status should be available to authorized users throughout the life cycle, e.g. call underway, supervisor review, quality review completed, returned to Paramedic for comment.		
5	Mand	Authorized users can view PCRs online.		
6	Mand	Describe how drop-outs in communications are handled.		

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ID	Priority	Requirement	Full, Partial, No	Comments
7	Mand	Changes to the PCR are recorded/logged including who made the change and the date/time. ✓ Changes/edits are clearly recognizable on the PCR, e.g. non-clinical audit staff making a change to the data such as a health card number		
8	Mand	Ability to demonstrate continued “Best Practices” in information handling. ✓ Only the document’s author and authorized personnel can change/append information		
9	Mand	System provides configurable levels of access to data. ✓ Access to data is controlled via mechanisms that mirror the actual business process ✓ Individual users are assigned to one or more user groups. ✓ Each user group is granted one or more access privileges to PCRs according to their position in the business flow. ✓ Access levels are configurable by the application administrator. ✓ Access to data is HIPAA compliant.		
10	High	✓ Provide details on process to create/append user privileges: <ul style="list-style-type: none"> ○ Security assigned to application ○ Security assigned to users ○ Security enabled by function ○ Security enabled by screen ○ Security assigned to groups - users assigned to group ○ User can be granted privileges beyond group access 		

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ID	Priority	Requirement	Full, Partial, No	Comments
11	Mand	Central server is secure from attack. Please explain the security system for your ePCR system.		
12	High	Remote Access is via a secure link and user privileges for viewing/editing/printing of patient records are strictly controlled.		
13	High	Ability to update user information from the server to field collection device.		
14	High	Secure transfer of completed PCRs between locations/stakeholders.		
15	High	Data easily secured/restricted, blocking access to patient identifier information ensuring patient confidentiality.		
16	Mand	A copy of the PCR in the original format as it was at the time it was completed or closed - in spite of any subsequent software changes that may have been made by the Vendor, Sacramento Metropolitan Fire District, or a third party - must be maintained in the event that there is a legal or medical question concerning the original document. This may be a function of the database when a PCR is closed or may be an image (.gif, .jpeg, .pdf) of the PCR that is saved and time stamped.		

4.4.4 Central Server

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Please provide a brief description and diagram of the technical environment you would recommend. The description should include hardware, telecommunications and system software. Also, indicate the network protocols that the software is compatible with for interfacing with other systems.		
2	Mand	Communication between the server from the portable units will be		

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ID	Priority	Requirement	Full, Partial, No	Comments
		via a wireless network. Which standards are supported and may be over the next 1 to 2 years?		
3	Mand	Provide a list of operating systems, which are compatible with the current version of the application.		
4	High	Operating system upgrades on back end system can be easily performed with minimal interruption in data collection.		
5	High	Back-end solution provides hardware and appropriate software redundancy.		
6	High	Describe the recovery process in the event of system failure. Include a discussion of lost data, what happens to transactions in progress, assurance of which transactions have been completed.		
7	High	Ability for multiple authorized users to access/append the PCR at the same time.		
8	High	Describe your recommended file backup process, including the hardware and software used.		
9	High	Server technology should be proven and adhere to industry standards.		
10	High	Server technology is non-proprietary, ability to support other applications - open architecture, open standards.		
11	High	Data can be passed in a standard format that is recognized by other systems. ✓ Health Level 7 (HL7) ✓ Extensible Markup Language (XML)		
12	High	Ease of storage and retrieval. There will eventually be approximately 150,000 records created a year. Please indicate expectation on time needed for PCR retrieval based on 10 years worth of data (approximately 1.5 Million records). What is the upper limit of records in the active database before archiving is recommended?		
13	Med	Database management system upgrades can be performed with minimal interruption in data collection.		

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ID	Priority	Requirement	Full, Partial, No	Comments
14	Med	Ability to create triggers from the system that alert the administrator of system events, e.g. a server shuts down.		
15	Med	Back end database application and server should have a minimum amount of downtime. ✓ Define the expected maintenance window required for the database that may require a restart/shutdown ✓ Define how backups are performed on the data, please describe if and how these affect the performance of the overall system		

4.4.5 Regionalization

The Sacramento Metropolitan Fire District EMS wants to have the capacity to link with our regional partners on this initiative. The following questions ask if your business has the capacity to link the Sacramento Metropolitan Fire District EMS with other regional service providers. Further questions and costing summaries will be asked of your ability to support this service provision in future discussions.

ID	Priority	Requirement	Full, Partial, No	Comments
1	High	What Database does your product(s) work with if required? Please also state the versions and releases supported.		
2	High	Ability to partition the server to accommodate other local EMS agencies running the same software to facilitate secure (privacy legislation-compliant) storage and retrieval.		
3	Mand	Explain how your system will allow pre-hospital agencies, hospitals, and a local emergency medical service agency to use the same software and same server while maintaining data integrity.		
4	High	Explain how your system could interface with local Hospital Systems (Mercy Health Care, Kaiser, Sutter Health Care, University California Davis Medical Center) to share patient information while maintaining HIPAA compliance.		

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4.5 Continuous Quality Improvement (CQI)

The CQI process is directed at improving patient care through an ongoing review of the care provided by paramedics and the system that they operate under. Within CQI is quality assurance that focuses on the individual paramedic and the skills that they perform. Research is intended to improve the system by continually evaluating the effectiveness of the medical protocols, medications, training, and equipment. This section is divided into two (2) tables, which are: Quality Assurance, and Research.

4.5.1 Quality Assurance

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	The Assistant Chief of EMS, CQI Manager, Medical Director, and General Counsel should have the ability to audit a PCR.		
2	Mand	PCR can be queried/searched using any field or combination of fields.		
3	Mand	Includes a pre-formatted report generator and querying capabilities for ad hoc queries. Has the ability to modify or create additional reports.		
4	Mand	Ability for authorized users to notify Medic of further information required in the PCR. Please describe how your system offers this functionality, e.g. alert, task list.		
5	Mand	<p>Ability to select a PCR for further review by Peer Review Committee with the following:</p> <ul style="list-style-type: none"> ✓ Drop down box with list of categories that describe the rational for the review by the Peer Review Committee <ul style="list-style-type: none"> ○ Good Call ○ Field Save ○ Documentation Issues ○ Treatment Issues ○ Policy Issues ✓ Text box that is associated with the above categories that describe the rational for the review of the PCR by the Peer Review Committee. ✓ Software is able to randomly pick a set portion (e.g. 10%) of all PCRs for audit and distribute these PCRs among members 		

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ID	Priority	Requirement	Full, Partial, No	Comments
		of the Peer Review Committee to be reviewed.		
6	Mand	Ability to run an audit/quality check on a PCR and determine which mandatory fields have not been satisfied and why.		.
7	Mand	Contains a report showing any incomplete PCRs or missing PCRs for a unit or staff member.		
8	High	Exception notification/reporting - flags are raised based on defined protocol/quality criteria. <ul style="list-style-type: none"> ✓ Clinical impression - respiratory distress, treatment - no oxygen administered ✓ Medication/Dosage to weight/age of patient ✓ Patient transported – Arrival times and name of hospital or destination ✓ Ability to change exception reporting parameters as needed 		
9	High	Ability to perform an automated quality analysis comparing the chief complaint and the procedures performed on a PCR and compare with the protocol procedures for the scope of practice. These reports will have parameters that are changeable.		
10	Mand	Software is able to randomly pick a portion of all PCRs for audit (e.g. 10%) and the ability to pick a certain number of each employees PCR for review. Ability to have such reviews of PCR distributed evenly between a group of employee and or by shift.		
11	Mand	For certification purposes, the ability to track the number of calls performed by each medic and the procedures performed by that individual.		
12	Med	Provides timely feedback to paramedic once data has been placed on server - adherence to medical protocol..		
13	High	Operational Performance Reporting <ul style="list-style-type: none"> ✓ The Administrative system has pre-formatted generic reports ✓ Please identify built-in reports and provide samples of each 		

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ID	Priority	Requirement	Full, Partial, No	Comments
14	High	Produce a summary of events/calls during shift by unit, by crew, by shift, and battalion.		
15	High	Age & Gender of all Out-of-Hospital Arrest Patients with Resuscitation Attempted.		
16	High	Locations of Out-of-Hospital Cardiac Arrest.		
17	High	Report on Patient Refusal of Service by paramedic and unit.		
18	High	Medical Quality Performance Trend Reports, e.g. trauma analysis, cardiac arrest analysis, chest pain analysis, stroke analysis, intubation analysis, age <16 analysis, SOB analysis. Please provide samples of these reports.		
19	High	Cardiac Arrest Reporting, e.g. cardiac arrest report by number of cardiac arrests, resuscitations attempted, cardiac etiology, witnessed arrest, bystander CPR, Shockable Rhythm VF/VT, Asystole/ PEA survival to hospital.		
20	High	Cardiac Arrests e.g. cardiac etiology, witnessed arrest, bystander CPR, initial rhythm VF/VT, call response interval, arrive to scene shock, survived to hospital, percentage survived to discharge.		
21	High	Survivors from Out-of-Hospital Cardiac Arrest, e.g. total patients, total resuscitations attempted, total cardiac etiology, medical call to arrival scene, total survived to hospital, arrest witnessed, bystander CPR, initial rhythm (Asystole), PEA, VF/VT, IV, survival to discharge, intubation.		
22	High	General System Reporting, e.g. call volume by chief complaint, call volume by gender, call volume by age, call volume by dispatch complaint, call volume as a result of trauma mechanism (fall, assault, MVC), call volume by individual paramedic, patient refusal by individual paramedic.		

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ID	Priority	Requirement	Full, Partial, No	Comments
23	High	CAD vs. ePCR exception reporting. ✓ Identifies CAD records for which there is no corresponding ePCR when an ambulance transports a patient. ✓ Identifies Firehouse records for which there is no corresponding ePCR.		
24	High	Summary of Treatment by any Paramedic.		
25	Mand	The ability to track narcotic usage and wastage. Please explain how this system will use signatures for witnessing wastage of unused narcotics.		
26	High	Summary of Procedures by Paramedic by Chief Complaint.		
27	High	Audited PCR available for the paramedic upon the next time they synchronize or connect with the server for any additional tasks to be completed with associated comments made by the auditor.		
28	Mand	Ability to route PCR audit feedback to various designated parties, e.g. Medical Director, Peer Review Committee, Deputy Chief of Operations, Assistant Chief of Operations, Battalion Chief, EMS Coordinator, Captain, or any individual in the system.		
29	High	Ability to alter the desired percentage in the percentage fractal calculation (e.g set at 85, 90, etc) for queries and reports.		
30	Mand	Mean, median and fractal reporting by unit, e.g. assigned until enroute, enroute to arrived at scene, arrived at scene to arrived patient, depart scene until arrived destination, arrived destination to ready status, on scene time by chief complaint.		
31	High	Summary reporting and comparison of calls: medical vs. trauma, trauma calls by mechanism, trauma on scene times, medical on scene times, chief complaints by age, chief complaint by dispatch complaint. Please show examples.		

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ID	Priority	Requirement	Full, Partial, No	Comments
32	High	<p>Standard Reports – Please show examples.</p> <p>(a) Patient Care Report – Format consistent with State of California requirements for a PCR.</p> <p>(b) Patient Refusal of Service Report – includes cautionary note with required signatures.</p> <p>(c) Skill focused reports – QA paramedic skill set, (ie: IV, intubation, Defibrillation, etc).</p>		
33	High	<p>“Canned” Call Volume Reports</p> <ul style="list-style-type: none"> ✓ Call volume by Chief Complaint (primary, secondary and tertiary) ✓ Call volume by gender ✓ Call volume by age ✓ Call volume by Dispatch complaint ✓ Call volume by trauma mechanism (ie: fall, assault, etc.) ✓ Call Volume by individual paramedic ✓ Patient refusal and non-transport by individual paramedic ✓ Call Volume by individual unit ✓ Unit Hour Utilization report ✓ Patient list by paramedic ✓ Mean, median and fractal: 911 call to arrived patient ✓ Mean, median and fractal: Unit assigned to arrived patient ✓ Mean, median and fractal: Unit enroute to arrived patient ✓ Mean, median and fractal: Unit arrived scene to arrived patient ✓ Mean, median and fractal: Unit arrived destination to transfer of care time ✓ Mean, median and fractal: Unit arrived destination to ready status ✓ Mean, median and fractal: Unit on scene time by chief complaint 		

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ID	Priority	Requirement	Full, Partial, No	Comments
34	High	<p>“Canned” Cardiac Arrest Reports</p> <ul style="list-style-type: none"> ✓ Description of Cardiac Arrests with AED on Scene ✓ Description of Cardiac Arrests with CPR Prior to Arrival sorted by “Performed by” ✓ Description of Cardiac Arrests sorted by “Witnessed By” ✓ Description of Cardiac Arrests based of Initial Rhythm, Rhythm and Respiration on Hospital Arrival ✓ Description of Cardiac Arrests based on Survival to Hospital (pulse on arrival) ✓ Description of Cardiac Arrests sorted by Initial Rhythm ✓ Description of Cardiac Arrests sorted by Age and Gender ✓ Description of Cardiac Arrests sorted by CPR Discontinued with ability to verify that Discontinuation Criteria were met ✓ Summary of Cardiac Arrest Procedures including IV, Intubation, CO₂ Detection, Drugs, etc ✓ Summary of Cardiac Arrests not Resuscitated (DOA) based on initial rhythm and No CPR 		
35	High	<p>“Canned” Trauma Reports</p> <ul style="list-style-type: none"> ✓ Percentage of Calls Medical vs. Trauma ✓ Percentage of Trauma Calls by Mechanism ✓ Summary of Motor Vehicle Collisions (MVCs) by indicators of injury ✓ Summary of MVCs by use of restraints ✓ Summary of MVCs by Impact location on vehicle ✓ Summary of MVCs by Vehicle Type ✓ Summary of Falls based on Chief Complaint Vital Signs, Procedures ✓ Summary of Trauma on-scene times 		

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ID	Priority	Requirement	Full, Partial, No	Comments
36	High	“Canned” Situation Reports ✓ Summary of Chief Complaints by Age ✓ Summary of Chief Complaint by Dispatch Complaint ✓ Summary of EMD Card by CTAS Score		
37	Mand	“Canned” Vital Signs Reports ✓ Percentage of Calls with Incomplete Vital Signs ✓ Percentage of Calls with an abnormal Vital Sign ✓ Percentage of Calls with Abnormal Vital Signs sorted by Chief Complaint ✓ Summary of Respiratory Calls grouped by Chief Complaint ✓ Summary of Hypertension Calls grouped by Chief Complaint		
38	Mand	“Canned” Procedures Reports ✓ Summary of Procedures by Paramedic (attempted/successful) ✓ Summary of Procedures by Patient (attempted/successful) ✓ Summary of Procedures done ✓ Summary of Procedures by Chief Complaint ✓ Summary of Intubations with documentation of Tube Placement Verification ✓ Summary of Intubations with at least the following stratification: 1. Success per patient when intubation was attempted a. Percentage successful per paramedic b. Percentage successful all patients by district personnel 2. Attempts versus success when intubation was attempted a. Per paramedic b. All attempts by district personnel ✓ Summary of Spinal Immobilization with clearance examination documentation ✓ Summary of Airway Procedures by Age, Chief Complaint, ✓ Summary of IV procedures by age, Chief Complaint ✓ Summary of glucose level determinations by paramedic, chief		

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ID	Priority	Requirement	Full, Partial, No	Comments
		complaint, grouped by results ✓ Summary of restraint use by chief complaint ✓ Summary of obstetrical deliveries with high risk deliveries identified ✓ Summary of traction splinting with documentation of perfusion by paramedic		
39	Mand	“Canned” Treatment Reports ✓ Summary of treatment by paramedic and date ✓ Summary of treatment by route, dosage, paramedic and system-wide ✓ Summary of chest pain receiving ASA by paramedic excluding ASA from medication list ✓ Summary of respiratory distress with medication use system-wide and paramedic ✓ Summary of cardiac arrest medication use system-wide and by paramedic ✓ Summary of Nitroglycerin use system-wide and paramedic with change in patient status ✓ Summary of oxygen use by chief complaint, and pulse oximetry ✓ Summary of medication use by chief complaint by paramedic ✓ Summary of D ₅₀ W use with Blood Glucose Level by paramedic ✓ Summary of Narcotic used system-wide and by paramedic ✓ Summary of effectiveness of pain management strategies		

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ID	Priority	Requirement	Full, Partial, No	Comments
40	High	<p>“Canned” Disposition Reports</p> <ul style="list-style-type: none"> ✓ Summary of disposition based on paramedic, chief complaint and type of unit (Non-Transport Unit or Transport Unit) ✓ Summary of transportation, transport position, etc by paramedic and system-wide ✓ Summary of chief complaint, disposition by system-wide and paramedic ✓ Summary of transportation destinations ✓ Summary of transports by type ✓ Summary of cancellations by EMS units ✓ Summary of transportation by EMS units ✓ Summary of trauma disposition based on age, mechanism, impact and vehicle type, restraint use ✓ Summary of disposition based on CPR ✓ Summary of treatment administered prior to cancellation 		
41	Mand	<p>Other Reports</p> <ul style="list-style-type: none"> ✓ Look up of patient by name, date, location, etc ✓ PCR recovery by search of date, event number, pick-up location, unit number, patient name and/or destination, medic name, Invoice #, etc ✓ CAD vs. PCR exception reporting. Identifies CAD records for which there is no corresponding PCR. ✓ Unit Utilization Hour – percentage of total hours in service in a 24 hour period. 		

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ID	Priority	Requirement	Full, Partial, No	Comments
42	Mand	<p>California State “Core Indicators” Reports – California Code of Regulations, Title 22 , Chapter 12, Quality Improvement Indicators:</p> <ul style="list-style-type: none"> ✓ Software must have “canned” reports applicable for pre-hospital agencies for all the sample reports listed by the State of California as “Core Indicators”. ✓ Must update these reports as the State of California updates the Core Indicators or any reports newly created and requested by the State of California. ✓ Please supply sample copies of these reports. 		

4.5.2 Research

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Ability to perform ad hoc searches and reports.		
2	Mand	Describe data mining tool used with the ePCR software including name, vendor and description of capabilities.		
3	High	Ability to notify predetermined parties about DOA, cardiac arrest and/or specific medication administration via email, pager, fax, etc.		
4	Mand	Ability to develop statistics and identify trends between different agencies using the same software. Benchmarking. Please explain how this could work for fire agencies within Sacramento, California using the same software and fire agencies outside of Sacramento using the same software.		
5	High	Explain how your system will enhance information for research purposes to improve protocols/procedures, e.g. improving current development of evidence-based protocols in Sacramento, California.		
6	High	Ability to flag special cases for review by other individuals or groups.		

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ID	Priority	Requirement	Full, Partial, No	Comments
7	Mand	Ability to produce Utstein-style Cardiac Arrest Reports and custom tailor template.		
8	Mand	Advanced Data Analysis and Discovery: ✓ Ability to perform multidimensional analysis, create reports, and share results or able to export data in a compatible format with statistical software such as SPSS. ✓ Ability to conduct statistical related analyses, e.g. standard deviation, and/or able to export data in a compatible format with statistical software such as SPSS.		
9	Mand	Scalable Web deployment ✓ Ability to deploy reports to web ✓ Ability to produce and share standard and ad hoc reports via the Internet ✓ Ability to scale reporting engine to hundreds of users		

APPENDIX 4

4.6 Training and Support

Your responses to this section of the RFP will indicate your organization's approach to training and ongoing support.

4.6.1 Training

A thorough training program in advance of installation is important for a successful implementation. Ongoing training is important in reducing the effects of employee turnover. Ease of training is critical for all users.

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Thorough, professional training, complete with precise documentation, is provided to all designated support staff, covering all components designated for in-house support.		
2	Mand	End-user training will be provided in Sacramento and mimic the production environment.		
3	Mand	Each training sessions will include a written evaluation completed by the trainer and trainees identifying any issues encountered with the application, and/or individuals' comfort with the application. ✓ Client and vendor representatives will review the evaluations and prepare appropriate action plan(s) to resolve		
4	Mand	Advanced training for all administrative staff and system administrators in the daily operation of the system. Please identify where this training should occur, e.g. your office versus client site.		
5	Mand	Ability to provide comprehensive train-the trainer skills development for use in training future employees. ✓ Provide an example of a training aid that is provided to train-the-trainer participants, e.g. printed user manual		
6	Mand	Ability to provide training materials for employees hired after implementation has been completed. ✓ Vendor provides master copy of course material in both electronic and printed versions. ✓ Rights to reproduce training material as needed for new hires, retaining copyright and original format		

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ID	Priority	Requirement	Full, Partial, No	Comments
7	High	Expected Trainer/Trainee ratio for “hands-on” training on how to use the equipment (approximately 750 staff would need training). ✓ Prior computer experience is not required for attendees ✓ Training should be done within a short time before the crew has to use the device in the field ✓ Each trainee should have access to a portable device during hands on training		
8	High	All training sessions provide user manuals. ✓ Please provide a sample of your user training manuals.		
9	High	All training sessions include scenarios to allow trainees to practice the skills taught. The Sacramento Metropolitan Fire District EMS Division will review and approve scenarios prior to sessions being offered to ensure adherence with Sacramento County Emergency Medical Agency Guidelines.		
10	High	Ability to incorporate Sacramento Metropolitan Fire District EMS training scenarios.		
11	Mand	All training sessions include Frequent Asked Questions (FAQ) and Quick Reference Material.		
12	Mand	All training sessions provide course outline and key points.		
13	Mand	Changes to training material are forwarded when available and/or are included with version upgrades.		

4.6.2 Support

ID	Priority	Requirement	Full, Partial, No	Comments
1	Mand	Describe your software warranty. During the software warranty period will updates/newer versions be made available?		
2	High	Describe your development methodology: Provide plan/schedule for deploying releases, versions, patches, and/or updates. Describe how these releases are provided to clients, e.g. cost per release, provided through annual application maintenance agreement.		

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ID	Priority	Requirement	Full, Partial, No	Comments
3	High	Support provided by vendor is available 7 days a week, 24 hours a day. ✓ 1-800 telephone support 24 x 7- indicate the levels of support and the provision for after hours support ✓ Internet Support 24 x 7		
4	High	What is the opportunity for dedicated Sacramento Metropolitan Fire District support resources?		
5	Med	What is the average response time to a software problem during prime and non-prime hours? Indicate what prime and non-prime hours are.		
6	Med	Indicate how many staff are in the support center, and if applicable, shown by time of day. Does the staff spend time in the field as well?		
7	Med	Availability for remote system monitoring and management, the capability to connect with clients' hardware over phone lines for troubleshooting.		
8	Med	Ability to upload new software releases directly to server and then to field collection device upon synchronizing the device, e.g. versions, patches, updates.		
9	Med	Describe the method used to indicate software errors. Does the system generate a log of such errors?		
10	Med	Define the level of support that exists when there is an error/bug which is not necessarily an application error but an operating system error, e.g. Microsoft, or a hardware issue, e.g. tablet vendor.		